IN THE CLAIMS

Please amend the claims as follows.

1. (currently amended) A method of determining a compensation signal for the compensation of a temporally varying field strength of the main magnetic field of a main magnet of a magnetic resonance imaging device which also includes at least one gradient field coil for generating a gradient magnetic field [and a magnetizable material which interacts with the magnetic fields of the device, characterized in that] , the method comprising:

determining at least one quantity which is characteristic of the temperature-dependent magnetic properties of [the] a magnetizable material [is determined] which is included as part of the magnetic resonance device and which interacts with the magnetic fields of the device,

providing the compensation signal [being provided] on the basis of said characteristic quantity.

2. (currently amended) A method as claimed in Claim 1[, characterized in that] wherein the electric signal applied to [the gradient magnetic field coil, or] each gradient magnetic field coil[,] is determined as [the] one characteristic quantity.

3. (currently amended) A method as claimed in [one or more of the preceding Claims, characterized in that] claim 1 wherein the

temperature of the magnetizable material is [measured] determined as [the] one characteristic quantity.

4. (currently amended) A method as claimed in [one or more of the preceding Claims,] claim 1 wherein the main magnet includes a main magnetic field coil having a resistance which is not negligibly small with [a view] respect to power dissipation, [characterized in that] and wherein a further quantity which is characteristic of the temperature-dependent magnetic properties of the magnetizable material is determined from the electric power dissipated in the main magnetic field coil.

5. (currently amended) A method as claimed in [one or more of the preceding Claims, characterized in that] claim 1 wherein the compensation signal is [determined] provided on the basis of a predetermined functional relationship between the temperature-dependent magnetic properties of the magnetizable material and [the relevant characteristic quantity or] each relevant characteristic quantity.

6. (currently amended) A method as claimed in Claim 5[, characterized in that] wherein the relevant functional relationship is [taken up] recorded in a look-up table, the input parameter of which is a representation of [the characteristic quantity or] each

characteristic quantity whereas its output parameter is a representation of the compensation signal.

7. (currently amended) A method as claimed in [one or more of the preceding Claims,] claim 1 wherein the device includes an auxiliary magnetic field coil for the compensation of the field strength of the main magnetic field, [characterized in that] and further comprising compensating the main magnetic field [is compensated] by generating an auxiliary magnetic field by means of the auxiliary magnetic field coil in conformity with the provided compensation signal [determined].

8. (currently amended) A method as claimed in [one or more of the preceding Claims,] claim 1 wherein the main magnet includes a main magnetic field coil having a resistance which is not negligibly small with [a view] respect to power dissipation, [characterized in that] and further comprising compensating the main magnetic field [is compensated] by controlling the electrical energizing of the main magnetic field coil in conformity with the provided compensation signal [determined].

9. (currently amended) A method as claimed in [one or more of the preceding Claims,] claim 1 wherein the device includes high-frequency (RF) oscillator means for energizing at least one high-frequency (RF) coil, [characterized in that] and further comprising

adapting during operation the frequency of the RF oscillator means [is adapted] in conformity with the provided compensation signal [determined].

10. (currently amended) A method as claimed in Claim 9[, characterized in that] wherein the frequency of the RF oscillator means is adapted prior to the application of one or more gradient magnetic field signals.

11. (currently amended) A method as claimed [in one or more of the preceding Claims,] claim 1 wherein the device includes processor-controlled processing means for the processing of an information signal acquired under the influence of the main magnetic field, [characterized in that] and further comprising controlling [in order to provide a compensated information signal] the processing means [are controlled] in conformity with the provided compensation signal [determined] in order to provide a compensated information signal.

12. (currently amended) A method as claimed [in one or more of the preceding Claims, characterized in that] claim 1 wherein variations of the field strength of the main magnetic field are determined and compensated, if necessary, one or more times during an acquisition period.

13. (currently amended) A method as claimed in [one or more of the preceding Claims, characterized in that] claim 1 further comprising measuring [the compensation signal is also determined] by measurement of] variations of the field strength of the main magnetic field which are caused by one or more further quantities, including external magnetic fields, atmospheric pressure and mechanical vibrations, and wherein the step of providing further comprises providing the [degree of] compensation signal [being determined] from a relevant functional relationship which represents the effect of the [relevant quantity] one or more further quantities on the main magnetic field.

14. (currently amended) A device for magnetic resonance imaging[, including] comprising:

a receiving space for accommodating an object to be imaged,

a main magnet for generating a main magnetic field in the receiving space,

at least one gradient field coil [and] ,

at least one high-frequency (RF) coil, [energizing and]

means for determining at least one quantity which is characteristic of the temperature-dependent magnetic properties of a magnetizable material which is included as part of the magnetic resonance device and which interacts with the magnetic fields of the device,

control means for energizing and controlling the main magnet, the gradient field coil and the RF coil, and

processing means which are actively coupled to the energizing and control means in order to determine a compensation signal for the compensation of a temporally varying field strength of the main magnetic field[, characterized in that] wherein the processing means are arranged to carry out the method claimed in [one or more of the preceding Claims] claim 1.

Please add the following new claims:

15. (New) A method as claimed in claim 2 wherein the temperature of the magnetizable material is determined as one characteristic quantity.

16. (New) A method as claimed in claim 15 wherein the main magnet includes a main magnetic field coil having a resistance which is not negligibly small with respect to power dissipation, and wherein a further quantity which is characteristic of the temperature-dependent magnetic properties of the magnetizable material is determined from the electric power dissipated in the main magnetic field coil.

17. (New) A method as claimed in claim 16 further comprising measuring variations of the field strength of the main magnetic

field which are caused by one or more further quantities, including external magnetic fields, atmospheric pressure and mechanical vibrations, and wherein the step of providing further comprises providing the compensation signal from a relevant functional relationship which represents the effect of the one or more further quantities on the main magnetic field.

18. (New) A method as claimed in claim 16 wherein the compensation signal is provided on the basis of a predetermined functional relationship between the temperature-dependent magnetic properties of the magnetizable material and each relevant characteristic quantity.

19. (New) A method as claimed in claim 7 wherein the main magnet includes a main magnetic field coil having a resistance which is not negligibly small with respect to power dissipation, and further comprising compensating the main magnetic field by controlling the electrical energizing of the main magnetic field coil in conformity with the provided compensation signal.

20. (New) A method as claimed in claim 7 wherein the device includes high-frequency (RF) oscillator means for energizing at least one high-frequency (RF) coil, and further comprising adapting during operation the frequency of the RF oscillator means in conformity with the provided compensation signal.